COMMODORE

MAX

MACHINE

USER'S
MANUAL

commodore
COMPUTER

USER'S MANUAL
STATEMENT

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- reorient the receiving antenna
- relocate the computer with respect to the receiver
- move the computer away from the receiver
- plug the computer into a different outlet so that computer and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402, Stock No. 004-000-00345-4.

WELCOME TO THE WORLD
OF COMMODORE COMPUTERS...

If you've never used a COMPUTER before, get ready for a big surprise because your Max Machine is going to introduce you to a whole new world of electronic fun!

Your MAX MACHINE isn't just one machine ... it's a HUNDRED machines ... and more! Every time you plug in a different Commodore cartridge, your MAX becomes a completely different machine.

Plug in a BASIC cartridge and program your MAX like any REAL COMPUTER ... that's because the Max Machine IS a real computer, and it's EXPANDABLE!

Did you know your Max can play songs like a flute or a harpsichord? That's right. Commodore music cartridges make it easy ... and you DON'T have to be a musician to play songs on your Max!

Most fun of all—wait till you play our Max VIDEO GAMES! We've got all your favorites from the arcades, like GORF, OMEGA RACE, WIZARD OF WOR and KICK-MAN, plus some totally new games you've never even seen before.

Our game controls are excellent ... joysticks, game paddles ... even a "lightpen" that lets you draw pictures on your television screen. And you can save your songs, drawings and BASIC programs on ordinary tape cassettes, using a Commodore Datassette tape recorder.

You're going to have a lot of fun with your Max. You're going to learn a lot, too. And what you learn will help you step into the future. Please join us — join Commodore — in the wonderful adventure called personal computing. You're going to love it!
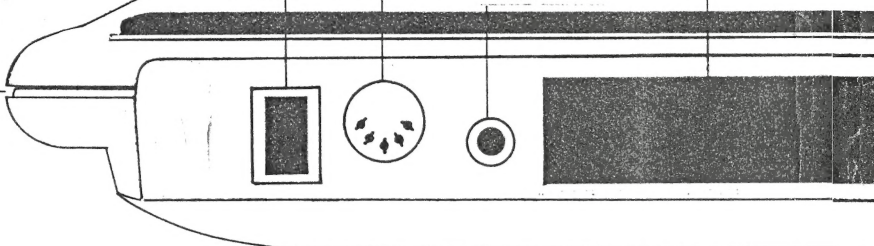
CONNECTING YOUR MAX
# TO A TELEVISION SET

GAME
CONTROL
PORT

ON/OFF POWER
SWITCH CONNECTOR

EXTERNAL
AUDIO
PORT

CARTRIDGE
SLOT

1. To set up your Max Machine, just follow these few easy steps. Unpack your Max from the display box (keep the packing materials for shipping and storage purposes). The following items should be included in your box:

    a. Max Machine
    b. Power Supply
    c. Small Metal Switchbox
    d. Video Cord

    e. Instruction Manual
    f. Warranty Card
    g. Commodore Magazine/User Club Subscription

2. You will need 2 electrical outlets (sockets) — one for the MAX and one for your television set.

3. Position the MAX and television set so you can use the keyboard comfortably while viewing the television screen ... ideally, a tabletop or desk. Turn the television set OFF.

4. Find the ON/OFF SWITCH at the right rear corner of the MAX. Make sure it's in the "OFF" position.

POWER SUPPLY

TO MAX
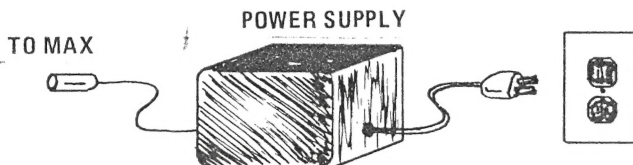
5. There are two cords coming out of the POWER SUPPLY BOX. Insert the 3-PRONGED POWER PLUG into an electrical outlet and insert the ROUND 5-PIN PLUG into the POWER CORD SOCKET on the right rear corner of the MAX (next to the ON/OFF SWITCH). NOTE: the power supply remains "ON" while plugged in so you should unplug it when not in use.

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CHANNEL SWITCH 3 ←——→ 4 | VIDEO (TV) PORT | DATASSETTE PORT | GAME CONTROL PORT
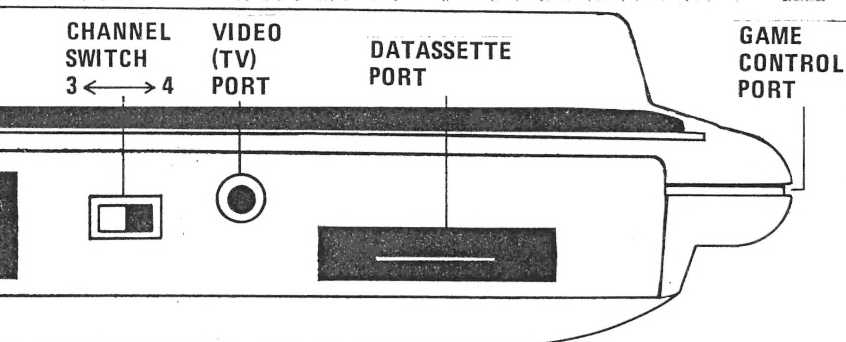
6. CONNECT THE VIDEO CABLE TO THE ROUND VIDEO PORT ON THE BACK OF THE MAX. Make sure you connect it to the VIDEO PORT, which is on the LEFT REAR CORNER of the MAX, behind the COMMODORE label, and not the AUDIO PORT, which looks similar. (see illustration)
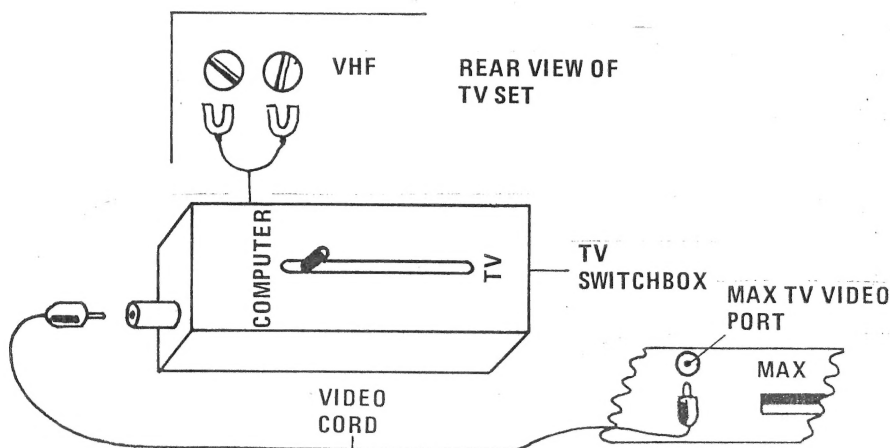
7. CONNECT THE OTHER END OF THE VIDEO CABLE TO THE ROUND SOCKET ON THE TV SWITCHBOX ... then, using a screwdriver, connect the two switchbox wires to the VHF ANTENNA LEADS on the back of your television and tighten the screws firmly.* If necessary, disconnect your antenna and reconnect it to the two screws at the bottom of the SWITCHBOX. This should allow you to switch back and forth between "TV" and "COMPUTER."

8. SET THE SWITCHBOX LEVER TO "COMPUTER."

9. MAKE SURE THE MAX IS TURNED OFF AND PLUG A CARTRIDGE INTO THE WIDE CARTRIDGE SLOT ON THE BACK OF THE CONSOLE. The cartridge should be seated firmly in the slot. To prolong the life of your MAX cartridges, only insert or unplug cartridges when the MAX is turned OFF.

10. TURN ON THE TELEVISION AND TUNE TO EITHER CHANNEL 3 OR 4, whichever has the WEAKER reception in your area. Find the SMALL 3/4 CHANNEL SWITCH on the back of the MAX, next to the VIDEO PORT, and set the switch for best reception. Adjust your television tuning for best color and reception.

11. Turn ON the MAX. Your television screen should come alive with the opening display of the cartridge you're using. The screen will not display anything unless a cartridge is plugged into the MAX. Read the instructions which come with each cartridge, and ENJOY!

12. If you have trouble with any of these steps, consult the troubleshooting chart on Page 11.

*NOTE: If your television set does not have 2 VHF antenna leads, you may have to obtain a special adapter.

YOU CAN PROGRAM
THE MAX MACHINE!

You don't have to be a genius to program the MAX ... you don't even have to know how to type! Commodore makes programming easy and fun with two BASIC cartridges for your MAX MACHINE.

LEARNING BASIC   MAX 3101

Why take an expensive programming course when you can write your first BASIC program in less than 15 minutes ... on the MAX MACHINE! Commodore's LEARNING BASIC CAR-TRIDGE turns your Max into a fully programmable computer that moves animated objects, plays sound effects, and makes calculating easy and fun.

LEARNING BASIC teaches first-time computerists of all ages how to write simple programs. The free instruction guide contains dozens of entertaining programming examples and gives you a "friendly" introduction to computer programming. Topics covered include key BASIC commands, numerical calculations, cartoon (sprite) animation, music and sound effects. Includes RAM memory for writing programs.

## MAX BASIC-PLUS   MAX 3102

If you want to get "serious" about programming, you need BASIC-PLUS. This extraordinary cartridge includes all the standard BASIC commands ... PLUS ... graphic symbols ... keyboard color controls ... programmable function keys ... complex mathematical functions ... 4.5 K RAM memory ... and the ability to store your programs on ordinary audio cassette tapes. BASIC-PLUS lets you write games and songs as well as more "practical" programs. A real "PLUS" for all experience levels!

COMMODORE PROGRAMMING BOOKS

Commodore publishes a variety of how-to guides and reference books to help you write better programs. MAX PROGRAM BOOKS and other publications are designed especially for use with MAX BASIC cartridges ... but almost any "how-to" book on BASIC can be used with your MAX BASIC cartridges. Consult your Commodore dealer or bookstore for available titles.

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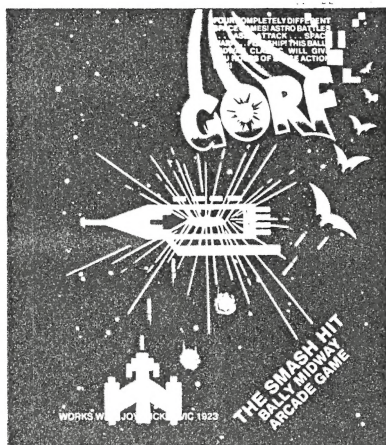
GORF (The Bally Midway Game)

This smash-hit Bally Midway arcade game includes FOUR COMPLETELY DIFFERENT SPACE GAMES ON ONE CARTRIDGE! Challenge your skill with Astro Battles, Laser Attack, Space Warp and Flagship. Can you increase your rank from Space Cadet to Space Avenger? Gorfs, Laser Ships, Neutronium Chunks, Escort Saucers, Invaders ... GORF has all these and more! Uses Joystick. MAX 3404

KICK-MAN (The Bally Midway Game)

You're not just "clowning around" in this fast-paced Bally Midway game. Try to catch the balloons before they fall ... kick them back before they break ... and try to get the "famous" secret character to help you get the points you deserve. Excellent cartoon graphics, multiple levels of play. Joystick or keyboard. MAX 3403

AVENGER

It's an INVASION of aliens and you have to defend the earth against swarms of descending intruders. Shoot the intruders before they land, get extra points for hitting "saucers." This fast-paced space game features authentic arcade action, sound effects and graphics. Joystick or keyboard. MAX 3501

MOLE ATTACK

Try to bop those nasty moles when they stick their heads out of their burrows ... Wack them on the head to gain points ... but don't hit their tails or you'll lose points! The action gets faster as time runs out. Extended play for high score ... and non-stop fun! Fantastic cartoon animation. Joystick or keyboard. MAX 3508

OMEGA RACE (The Bally Midway Game)

Space action and strategy combined! Maneuver your ship through the deadly Omega Race, evading and destroying android ships, photon mines, vapor mines, command ships and death ships. Cruise the arena or bounce off the force field boundaries to gain position. A "must" for space game enthusiasts! Compare the Max version to the arcade original ... it's terrific! Joystick or Paddles. MAX 3401

WIZARD OF WOR (The Bally Midway Game)

The Wizard's dungeons contain monsters, enemy spacemen, scorpions and the wildest collection of inter-galactic demons and maze creatures you've ever seen! You have to defeat all the creatures in each dungeon before you can move to the next one, but the dungeons get harder and the creatures get creepier. Great animation, sound effects, fast action! Joystick. MAX 3402

ROAD RACE

It's midnight and you're still on course. The road markers race by at blinding speed ... can you make it past 6 kilometers? Will your engine overheat? Why are your tires skidding? Faster! Time's running out! Shift into high gear. What a race! For an authentic race simulation, try Road Race ... it's a smash! Joystick, Paddles or Keyboard. MAX 3505

THE VISIBLE SOLAR SYSTEM

This remarkable computerized AS-TRONOMY cartridge features full color computer animation of the major planets in our solar system, an animated lesson on how the planets rotate around the sun, your weight and age comparisons for the planets, and ... ASTROCALC ... which gives you an instant comparison of the planets' vital statistics. Technically accurate and evaluated by professional astronomers, this cartridge comes with a detailed instruction manual which takes you on a spectacular visual "tour" of our solar system. MAX 3301

RADAR RAT RACE

Can you finish the maze and eat all the cheese before time runs out? Lurking cats, enemy rats, "bonus rounds," radar scanning and incredible cartoon graphics make this a challenging ACTION GAME for all ages. Special reward for reaching high score. A humorous game of wit, strategy and reflexes. Joystick or keyboard. MAX 3504

JUPITER LANDER

An authentic space landing simulation. Pilot your "Jupiter Lander" through the treacherous crevices of a mysterious planet. Variable rocket thrust and horizontal retros, anti-gravity and fuel gauges. Each landing zone has a different degree of difficulty. Long and close screen views. This one will test your manual dexterity to the limit! Joystick. MAX 3502

HOME BABYSITTER

Give your pre-school child a headstart in computing! This remarkable "child-tested" cartridge contains THREE separate programs. Program 1 teaches the "Alphabet Song" using the letters on the MAX keyboard. Program 2 shows how to ADD NUMBERS, using cartoon animation. Program 3 is a creative "face-maker" that changes the hat, eyes, ears, nose, mouth and chin when various keys are pressed ... with surprise hidden animation! Includes "color select" option. This "babysitter" will keep your young child occupied for hours! MAX 3303

SPIDERS OF MARS

You're flying along the surface of Mars, minding your own business, when a swarm of bees swoop down from the left and start shooting at you! Watch out! There's more on the right and above you! Here comes the SPIDER! If he reaches the ground he'll trap you in his "space web!" Fabulous animation. 10 levels of play. Joystick or keyboard. MAX 3506

MAX MUSICMAKER

You don't have to be a musician to use the MAX MUSICMAKER! It's easy to compose songs using 3 voice harmony and 5 octaves. The "Edit and Listen" feature lets you HEAR the notes as you compose them ... and you can SEE THE NOTES ON YOUR TELEVISION SCREEN when your song plays back. Choose from 10 musical instruments ... or ... create your own "special instrument" using built-in special effects. Select voice, octave, tempo, note (sharp, flat, dotted), rests and some exotic "synthesizer" settings as well. Repeat sections with a simple command. Sample song included. Best of all, you can SAVE and LOAD your creations on the Commodore DATASSETTE TM recorder. MAX 3201

COMMODORE ARTIST

Become a computer artist! The COMMO-DORE ARTIST lets you create colorful graphic images on your television screen, using a JOYSTICK or LIGHTPEN to create designs in 16 colors from a computerized "palette." This easy-to-use cartridge is for artists of all ages, from school children to professionals ... and you can SAVE your creations on tape using a Commodore DATASSETTE recorder! MAX 3202

MAX LEARNING BASIC

This cartridge turns your Max into a true computer and shows you how to write computer programs in BASIC. All the "key" BASIC commands are included. Just follow the free instruction manual and you'll be writing programs in less than 15 minutes! A perfect introduction to programming for any first-time computerist! MAX 3101

MAX BASIC-PLUS

In addition to this cartridge, includes additional BASIC commands, keyboard graphic symbols, color controls, and advanced math functions. Extra memory is included on the cartridge to let you write longer programs, and you can SAVE and LOAD your BASIC-PLUS programs using a Commodore DATASSETTE recorder. A free BASIC reference guide is included. A real "plus" for any serious programmer. MAX 3102

MAX GAME CONTROLS AND
THE COMMODORE DATASSETTE

Not only does Commodore have the best all in one computer, music synthesizer and game machine, but we've got some of the best game controls and accessories you'll ever use! All of these accessories work not only with the MAX, but also with the VIC, COMMODORE 64 and other Commodore computers:

THE COMMODORE JOYSTICK

Our rugged joystick stands up to hours upon hours of zapping, zonking, blasting, bopping action ... and it's easy to use, too. The special design gives our joystick a comfortable feel, fast response, and ... it's just as easy to use for right-handed and left-handed players! The MAX MACHINE accepts ONE OR TWO joysticks, for exciting one or two-player game action.

COMMODORE TWO PLAYER GAME PADDLES

Twisting, turning, steering actions require game controls that twist, turn and steer quickly and reliably ... watch out! ... don't run off that road! Commodore ONE OR TWO PLAYER game paddles keep you on course. Paddles come in sets of two and provide full rotation dial and fire button.

COMMODORE LIGHTPEN

Commodore's unique FIBER OPTIC LIGHTPEN lets you draw pictures on the screen with the COMMODORE ARTIST, or with one of the Commodore BASIC cartridges. Imagine focusing a narrow beam of light at your television screen and actually drawing pictures in different colors, or moving objects around on the screen ... it sounds like science fiction but it's not. It's here. It's fun. It's our lightpen! Available 1983.

COMMODORE DATASSETTE

Commodore's DATASSETTE (tm) recorder lets you store your MAX programs, songs and pictures on inexpensive audio tape cassettes. That's right. You can SAVE your MAX creations on tape using the Commodore DATASSETTE ... and the DATASSETTE works with ALL Commodore computers! The DATASSETTE is easy to use ... it works like an ordinary tape recorder. Just hit PLAY and RECORD to record your program. Press REWIND and PLAY to LOAD your program back into the MAX. It's not magic. It's just another example of Commodore technology bringing you a powerful, affordable way to make your computing easier and more enjoyable. Some of the MAX cartridges which allow you to save programs using the DATASSETTE include: COMMODORE BASIC, COM-MODORE COMPOSER, and COMMODORE ARTIST.

MAKING MUSIC
ON YOUR MAX

Just plug in a music cartridge and . . . presto . . . your Max is a music synthesizer, composer and keyboard piano! You'll be amazed how musical you are! And wait till you connect your Max to your own sound system, using the Max's built-in audio jack!

Like harpsichord music? Play it, Mozart! How about some "moog" music? The Max has that, too. From contemporary to classical, you'll be playing incredible songs on your Max . . . while watching each note scroll by on your TV screen. Best of all, you don't have to be a musician to make music on your MAX!

THE MAX MUSICMAKER   MAX 3301
This amazing cartridge lets you write your own music and play it back sounding like several different instruments, from harpsichord to flute . . . or transcribe your favorite songs from sheet music and add your own "special effects." A sample song is included, along with an easy-to-use "editing" feature that lets you HEAR the notes as you enter them, and SEE them displayed on the screen. After you're done "composing," you can SAVE your song on tape using the Commodore DATASSETTE, and LOAD it back again later to make changes and revisions. There's even a KEYBOARD PIANO feature that lets you play your Max keyboard like an electronic organ. This cartridge is so versatile, it'll hold you spellbound for hours whether you're a student, music scholar, jazz musician or rock star. You've got to hear it to believe it!

CONNECTING THE MAX TO YOUR OWN SPEAKER SYSTEM
You can play MAX music through your own speakers instead of through your television set. Here's how it's done . . . just connect an audio cable from the Max AUDIO PORT (see illustration) to the INPUT or AUXILIARY socket on your amplifier (the MAX AUDIO port accepts a standard "phono" pin plug). If you make this connection and turn on the amplifier, the sound will be directed through your audio system . . . but the VIDEO will still appear on your television screen. Now you can play music through your own speakers, or tape record songs and special effects. You'll be amazed at the MAX-imum musical power this little machine can create.

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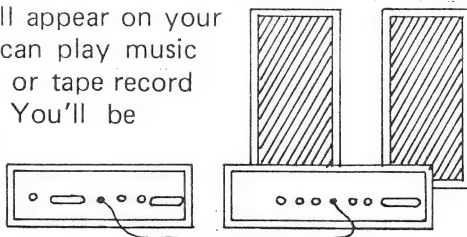
GROW WITH
COMMODORE . . .

THE COMMODORE 64

If you want to complement your MAX entertainment system with a more powerful computer, the Commodore 64 is the next logical step. Your MAX cartridges and accessories work DIRECTLY on the Commodore 64, which means your investment in the Max can "grow" with your expanding computer system.

The Commodore 64 is a fully-expandable personal computer offering color, sound, graphics, and a variety of special software that lets you do everything from write novels to set up a small business.

Commodore accessories for the 64 include the Commodore Single Disk Drive which lets you store information on high capacity floppy diskettes. Commodore printers let you make paper copies of your letters, reports and program listings. And low-priced Commodore modems give you useful information like stock quotes and news summaries . . . over the telephone!

The Commodore 64 is a perfect addition to your MAX entertainment system . . . just one way Commodore helps you keep pace with your growing computing needs.

COMMODORE EDUCATIONAL & SMALL BUSINESS COMPUTERS

Commodore also makes low-priced "professional" and "business" computer systems especially designed for use in schools and offices. Commodore "P" and "B" series computers provide substantial built-in memory (128K and up) and features normally found on much more expensive computers.

Commodore disk storage devices can store up to one-half megabyte on each floppy diskette, and include hard disks providing over 6 megabytes of storage space. Letter quality printers make crisp, clear copies of letters, business reports, contracts and other documents.

Commodore Professional and Business software includes programs that run in several different programming languages, including "6502-based" programs as well as "Z80-based" software written in C/PM (tm).

TROUBLESHOOTING CHART

SYMPTOM	CAUSE	REMEDY
NO PICTURE	MAX not "On".	Turn power switch on MAX to ON position and wait a few seconds.
	MAX not plugged in.	Check power socket.
	Cartridge not inserted.	MAX will not operate without a cartridge plugged in. Insert a cartridge.
	Cartridge not seated properly.	Turn MAX OFF, push cartridge firmly into socket, and turn MAX ON. Turn MAX off and on a few times if necessary.
	Video Cable not plugged in to Switchbox or TV.	Check connections.
	Incorrect TV hookup.	MAX connects to "VHF" terminals on TV
	Video Cable connected to Audio Port.	Connect the Video Cable to the Video Port.
POOR TELEVISION PICTURE	TV on wrong channel.	Tune to Channel 3 or 4.
	MAX Channel Switch on wrong setting.	Flip switch on back of MAX to match best TV channel (3 or 4).
	Picture too dark, too light or "fuzzy".	Adjust your TV tuning settings for best reception.
PICTURE WITH POOR COLOR	Bad color adjustment on your television.	Adjust color, hue and brightness controls.
PICTURE OKAY, BUT NO SOUND	TV volume too low, or tuning settings set improperly.	Adjust volume or TV tuning settings.
	Cable plugged into AUDIO PORT and not plugged into amplifier.	Connect cable or turn on amplifier.
NO RESPONSE WHEN MAX IS TURNED ON	Bad fuse in MAX.	Take MAX to your authorized Commodore Service Center for re-placement of fuse.*

*Note: The MAX uses a one amp fuse.

WARRANTY
& SERVICE

Commodore Business Machines, Inc. ("Commodore") warrants to the original consumer purchaser that its MAX Personal computer products ("MAX") (not including computer programs on cassettes or disks) shall be free from any defects in material or workmanship for a period of 90 days from the date of purchase. If a defect covered by this warranty occurs during this 90-day warranty period, you should return the unit within such 90 days to the *dealer from whom you purchased it*, together with a copy of your sales slip or similar proof-of-purchase, and the dealer will repair or replace the defective unit. In the unlikely event that your dealer is unable to repair or replace your unit you may, if necessary, return the unit freight prepaid, together with your sales slip or similar proof-of-purchase, to Commodore Consumer Products Group Service Center, 390 Reed Street, Santa Clara, CA 95050. Pack it carefully to avoid transit damage. In this case, ninety (90) days warranty service can only be carried out if proof-of-purchase is received with the product by Commodore during the ninety (90) day warranty period.

The warranty does not cover damage or malfunctions resulting from improper handling, accident, misuse, abuse, failure of electrical power, use with other products not manufactured or approved by Commodore, damage while in transit for repairs, repairs attempted by any unauthorized person or agency, or any other reason not due to defects in materials or workmanship. This warranty is also void if the serial number has been altered or defaced.

ANY IMPLIED WARRANTIES ARISING OUT OF THE SALE OF THIS UNIT INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OR MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE ABOVE NINETY (90) DAY PERIOD. COMMODORE'S LIABILITY IS LIMITED SOLELY TO THE REPAIR OR REPLACEMENT OF THE DEFECTIVE UNIT IN ITS SOLE DISCRETION, AND IN NO EVENT SHALL INCLUDE DAMAGES FOR LOSS OF USE OR OTHER INCIDENTAL OR CONSEQUENTIAL COSTS, EXPENSES, OR DAMAGES INCURRED BY THE PURCHASES, INCLUDING WITHOUT LIMITATION ANY DATA OR INFORMATION WHICH MAY BE LOST OR RENDERED INACCURATE, EVEN IF COMMODORE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

All computer programs, whether sold by Commodore or others, are distributed on an "AS IS" basis without warranty of any kind. The entire risk as to the performance and suitability of such programs is with the purchaser.

Should the programs (on cassettes or disks) prove defective following their purchase, the purchaser and not the manufacturer, distributor, or retailer assumes the responsibility for service or replacement.

Commodore shall have no liability or responsibility to a purchaser, customer, or any other person or entity with respect to any liability, loss or damage caused or alleged to be caused directly or indirectly by computer programs sold by Commodore or others. This includes but is not limited to any interruption of service, loss of business or anticipatory profits or consequential damages resulting from the use or operation of such computer programs.

Commodore shall have no obligation to modify or update any products once manufactured.

Some states do not allow limitations on how long any implied warranty lasts or exclusion of consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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